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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/352,976	07/14/1999	MICHAEL D. GILBERT	00169-027001	2851

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EXAMINER	
CHANG, VICTOR S	

ART UNIT	PAPER NUMBER
1771	

DATE MAILED: 12/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/352,976	GILBERT, MICHAEL D.	
	Examiner	Art Unit	
	Victor S Chang	1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 September 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-32,34-38,40,41 and 62-65* is/are pending in the application.

4a) Of the above claim(s) *34-38,40,41 and 62-65* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *050823* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. The Examiner has carefully considered Applicant's amendments and remarks filed on 9/18/2003. Applicant's amendments to the claims 1-14, 16 and 18-26, and cancellation of claims 33, 39 and 42-61 have all been entered.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Rejections not maintained are withdrawn.

4. The Examiner apologizes that one of the 1449 forms was inadvertently not initialed in the prior Office Action mailed 2/28/2003. As such, an initialed and signed copy of 1449 Form, which lists the reference US 3679534, is attached to the present Office Action. As to the newly submitted 1449 Form dated 5/28/2003, the Examiner notes that it is a duplicate of the same reference JP 11-134257 which has been previously submitted in 1449 Form, received 9/23/2002, and its initialed copy was mailed 2/28/2003. Nevertheless, the Examiner has initialed the newly submitted 1449 Form, and attached it to the present Office Action as well.

Election/Restrictions

5. Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-32, drawn to a composition comprising a curable polymeric material and an electrolyte, classified in class 428, subclass 355EP.

II. Claims 34-39, 40, 41 and 62-65, drawn to a bonded structure comprising a composition disposed between electrically conductive surfaces, classified in class 428, subclass 40.1.

The inventions are distinct, each from the other because of the following reasons:

Inventions Group I and Group II are related as mutually exclusive species in an intermediate-final product relationship. Distinctness is proven for claims in this relationship if the intermediate product is useful to make other than the final product (MPEP § 806.04(b), 3rd paragraph), and the species are patentably distinct (MPEP § 806.04(h)). In the instant case, the intermediate product is deemed to be useful as an adhesive for bonding electrically non-conductive surfaces and the inventions are deemed patentably distinct since there is nothing on this record to show them to be obvious variants. Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions anticipated by the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

During a telephone conversation with Sean Daley on 12/1/2003 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-32.

Affirmation of this election must be made by applicant in replying to this Office action. Claims 34-39, 40, 41 and 62-65 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 112

6. Claims 1-32 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling, substantially for the reasons set forth in section 3 of Paper No. 18, together with the following additional observations.

With respect to Applicant's argument that "Applicant finds the rejections very difficult to understand because the Examiner seems to be confusing the different statutory requirements", and also requests to clarify the rejection under 35 U.S.C. 112 (Remarks, page 9, 4th paragraph), the Examiner notes that a claim which omits matter disclosed to be essential to the invention as described in the specification or in other statements of record may be subject to rejection under 35 U.S.C. 112, first paragraph, as not enabling, or under 35 U.S.C. 112, second paragraph. See MPEP § 2163.I.B. As such, the lack of description of a representative number of adequately described species in independent claim 1 are rejected under both 35 U.S.C. 112, first paragraph and second paragraph.

With respect to Applicant's argument that "it is apparent that the specification satisfies the enablement requirement with respect to the claims" (Remarks, page 10, top paragraph), the Examiner repeats (see Paper No. 18, pages 2-3, bridging paragraph) that the independent claim 1, which recites a "composition", as a genus, having two

"functionalities", or properties, gives no notice as to what compositions might infringe the claimed "composition". In particular, the Specification only discloses polymeric material forming the matrix of the composition, which hardly represents "composition" as a genus per se; similarly, the disclosed ionic conductivities in the range of 10^{-11} to 10^{-5} S/cm at room temperature (Specification, page 12, first complete paragraph) also appears inadequate to present "composition" as a genus, because species or materials other than polymeric material and/or ionic conductivity in distinctly different range have not been disclosed in the Specification. As such, for claims 1-29, the Examiner repeats that the absence of suitable polymer compositions and ionic conductivities in the independent claim 1 renders the claimed invention unduly broad and in excess of its provided enablement, because these "functionality" recitations purport to cover everything which will perform the desired functions regardless of its composition, and it appears to read upon any conceivable combination of ingredients either presently existing or which might be discovered in future and which would impart desired characteristics. *Ex parte Slob* (PO BdApp) 157 USPQ 172. Further, it should be noted that the written description requirement for a claimed genus may be satisfied through sufficient description of a representative number of species by actual reduction to practice ... by functional characteristics coupled with a known or disclosed correlation between function and structure ... sufficient to show the applicant was in possession of the claimed genus. If a representative number of adequately described species are not disclosed for a genus, the claim to that genus must be rejected as lacking adequate written description under 35 U.S.C. 112, first paragraph. See MPEP § 2163.IIA3(a)ii.

Likewise, regarding claims 30-32, the Examiner notes that the essential ionic conductivities is absent from the independent claim 30, and renders the claims unduly broad as set forth above.

7. Claims 1-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention, substantially for the reasons set forth in section 4 of Paper No. 18, together with the following additional observations.

With respect to Applicant's argument that "the "functionalities" required by the claims are explicitly defined in the application at page 4" (Remarks, page 10, second full paragraph), the Examiner notes that the "functionalities" defined at page 4 in the Specification are clearly desired "properties" in a composition, rather than the composition itself. As such, for claims 1-29, the Examiner repeats (see Paper No. 18, page 3) that claims merely setting forth physical characteristics desired in article, and not setting forth specific compositions which would meet such characteristics, are invalid as vague, indefinite, and functional. *Ex parte Slob* (PO BdApp) 157 USPQ 172.

Likewise, regarding claims 30-32, the Examiner notes that the in claim 30, line 6, the phrase "sufficient ionic conductivity" appears vague and indefinite, i.e., it is unclear what is the scope of the "ionic conductivity".

Response to Amendment

8. Claims 1-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moulton et al. (US 5441830), substantially for the reasons set forth in section 5 of Paper No. 18, together with the following additional observations.

With respect to Applicant's response arguing that "The articles disclosed by Moulton essentially contain a three layer combination of a foil and a composite electrode with an adhesive material therebetween" (Remarks, page 11, first paragraph), the Examiner notes that the aforementioned embodiment by Moulton is not relied upon in the prior Office Action, and the fact that Moulton teaches other embodiment is irrelevant.

With respect to Applicant's argument that "Moulton's electrode can be a composite cathode that contains a polymer and a salt, this material does not appear to be capable of forming an adhesive bond to an electrically conductive surface" (Remarks, page 11, first paragraph), the Examiner repeats (see Paper No. 18, page 4) that Moulton expressly teaches that "the composite electrode contains a polymer which acts to bind the composite materials together and an electrolytic solvent ... Further, since it is well known that an electrode layer is conventionally formed on a current collector, such as a metal foil, it is believed that adherence between an electrode and a current conductive surface is inherent".

With respect to Applicant's argument that "nowhere does Moulton disclose a material that can form an adhesive bond having a shear strength of greater than 200 psi and that also has sufficient ionic conductivity to support a faradic reaction at an

electrically conductive surface, where the faradic reaction weakens the adhesive bond" (Remarks, page 11, first paragraph), the Examiner again strongly urges (see Interview Summary dated 4/22/2003) that a Declaration with comparative data to distinguish the adhesive strength between the instant invention from Moulton's conventional electrode composite would help to clarify the point of novelty and/or nonobviousness. As to the weakening of the adhesive bond by faradic reaction and Applicant's argument that "Nor has the Examiner met the appropriate standard to demonstrate that Moulton inherently discloses Applicants' claimed compositions" (Remarks, page 11, second paragraph), the examiner notes that the "compositions" recited in independent claims 1 and 30 are either not enabling or vague and indefinite, as set forth above. Further, Moulton clearly teaches a composite electrode contains a polymer binder and an electrolyte, as set forth above. As such, in the absence of unexpected results, where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a *prima facie* case of either anticipation or obviousness has been established. See MPEP § 2112.01.

Similarly, With respect to Applicant's argument that "whereas Moulton is concerned with preparing materials having certain electronic conductivity properties, the materials covered by the pending claims require particular ionic conductivity properties. As known to those skilled in the art, these can be two very different problems" (Remarks, page 12, top paragraph), the Examiner notes that Moulton clearly teaches a composite electrode which contains a polymer binder and an electrolyte, as set forth above. Furthermore, it should be noted that *prima facie* obviousness is not rebutted by merely

recognizing additional advantages or latent properties present in the prior art. See MPEP § 2145.II.

Finally, with respect to the well known effect that charge/discharge cycles weaken interfacial adhesion between the current collector and the electrode layer, the Examiner notes additional state of the art JP 09199113 A (Abstract), which teaches a positive electrode having a structure supporting an active material, non-aqueous electrolyte and a polymer holding (i.e., adhering) the electrolyte to a metal sheet (i.e., collector), and JP '113 expressly teaches that the charge/discharge cycle life can be improved by increasing the adhesion between the electrode layer and a metal collector.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor S Chang whose telephone number is 703-605-4296. The examiner can normally be reached on 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel H Morris can be reached on 703-308-2414. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

VSC

DANIEL ZIRKER
PRIMARY EXAMINER
GROUP ~~1300~~
1700

Daniel Zirker